



**DEPARTMENT OF THE NAVY**  
BOARD OF INSPECTION AND SURVEY  
2600 TARAWA COURT SUITE 250  
VIRGINIA BEACH, VA 23459-3295

INSURVINST 4730.74  
25 July 2012

INSURV INSTRUCTION 4730.74

FROM: PRESIDENT, BOARD OF INSPECTION AND SURVEY

SUBJ: SUBMARINE DYNAMIC ELECTRIC PLANT DEMONSTRATION

1. Purpose. To establish the President, Board of Inspection and Survey (PRESINSURV) policy and standards for evaluating the dynamic features of a submarine's electric plant.

2. Discussion. Electric plant functional demonstrations will be conducted for all submarine Material Inspections (MIs) and Combined Trials (CTs). All start-up checks will be conducted via Standard Operation only for each machine. All load sharing will be conducted via Standard Operation for each machine. Equipment to be demonstrated includes:

a. Ship's Service Turbine Generators

(1) Over-speed trip demonstration per applicable MRC.

(2) Start-up checks including governor response per applicable Steam and Electric Plant Manual.

(3) Electric plant load sharing during electric plant line-up changes per applicable Steam and Electric Plant Manual.

(4) Operation at maximum attainable load per applicable Steam and Electric Plant Manual during the Full Power Demonstration.

b. Ship's Service Motor Generators (when applicable)

(1) Over-speed trip check per applicable MRC.

(2) Start-up checks per applicable Steam and Electric Plant Manual.

(3) Electric plant load sharing during electric plant line-up changes per applicable Steam and Electric Plant Manual.

c. Emergency Diesel Generator

- (1) Snorkel at full load while submerged.
  - (2) Align and test spare governor per Diesel Technical Manual and applicable MRC.
  - (3) Over-speed and under-frequency trip checks per applicable MRC.
  - (4) Electric plant load sharing during electric plant line-up changes per applicable Steam and Electric Plant Manual.
- d. Ship's Main Storage Battery. Test discharge performance administrative review.
3. Policy. Dynamic electric plant operations will be conducted on all MIs and CTs.
  4. Pre-Inspection Requirement. Conduct of these demonstrations require no additional pre-inspection actions by the ship beyond those specified in OPNAVINST 4730.2 (series) and the inspection services message sent approximately 45 days prior to the inspection.
  5. The ship's Commanding Officer remains completely responsible for the safe conduct of these demonstrations. Nothing is more important than safety of personnel and equipment.

//s//  
R. O. WRAY

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